



## Complete Summary

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### GUIDELINE TITLE

Treatment of childhood overweight and obesity.

### BIBLIOGRAPHIC SOURCE(S)

Michigan Quality Improvement Consortium. Treatment of childhood overweight and obesity. Southfield (MI): Michigan Quality Improvement Consortium; 2008 Jun. 1 p.

### GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Michigan Quality Improvement Consortium. Treatment of childhood overweight. Southfield (MI): Michigan Quality Improvement Consortium; 2006 Nov. 1 p.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

- Overweight
- Obesity

### GUIDELINE CATEGORY

Evaluation  
Management  
Prevention  
Risk Assessment

## **CLINICAL SPECIALTY**

Family Practice  
Internal Medicine  
Nursing  
Nutrition  
Pediatrics

## **INTENDED USERS**

Advanced Practice Nurses  
Dietitians  
Health Plans  
Physician Assistants  
Physicians

## **GUIDELINE OBJECTIVE(S)**

- To achieve significant, measurable improvements in the specific treatment of childhood overweight and obesity through the development and implementation of common evidence-based clinical practice guidelines
- To design concise guidelines that are focused on key management components of childhood overweight to improve outcomes

## **TARGET POPULATION**

Children 2 years of age or older with body mass index (BMI) in the following ranges:

- BMI  $\geq$  85<sup>th</sup> percentile
- BMI  $\geq$  85<sup>th</sup> to 94<sup>th</sup> percentile (overweight) without risk factors or complications
- BMI  $\geq$  85<sup>th</sup> to 94<sup>th</sup> percentile with risk factors or complications
- BMI  $\geq$  95<sup>th</sup> percentile (obese) with or without risk factors or complications

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Evaluation**

1. History and physical examination
  - Primary and secondary causes of obesity
  - General and weight-related comorbidities
  - Signs and symptoms
  - Pulse and blood pressure
  - Laboratory tests
  - Monitor body mass index (BMI)

2. Risk assessment

### **Prevention/Management/Treatment**

1. Reinforcement of prevention recommendations
2. Lifestyle interventions and behavior modification to reach weight maintenance
3. Dietary regulation of body weight and fat based on BMI percentile
4. Treatment of risk factors and complications
5. Specialist referrals

## **MAJOR OUTCOMES CONSIDERED**

Not stated

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Searches of Electronic Databases

### **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

The Michigan Quality Improvement Consortium (MQIC) project leader conducts a search of current literature in support of the guideline topic. Computer database searches are used to identify published studies, existing protocols and/or national guidelines on the selected topic developed by organizations such as the American Diabetes Association, American Heart Association, American Academy of Pediatrics, etc. If available, clinical practice guidelines from participating MQIC health plans and Michigan health systems are also used to develop a framework for the new guideline.

### **NUMBER OF SOURCE DOCUMENTS**

Not stated

### **METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE**

Weighting According to a Rating Scheme (Scheme Given)

### **RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE**

#### **Levels of Evidence for the Most Significant Recommendations**

- A. Randomized controlled trials
- B. Controlled trials, no randomization
- C. Observational studies
- D. Opinion of expert panel

### **METHODS USED TO ANALYZE THE EVIDENCE**

Review

### **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

Not stated

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

## **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Using information obtained from literature searches and available health plan guidelines on the designated topic, the Michigan Quality Improvement Consortium (MQIC) project leader prepares a draft guideline to be reviewed by the medical directors' committee at one of their scheduled meetings. Priority is given to recommendations with [A] and [B] levels of evidence (see "Rating Scheme for the Strength of the Evidence" field).

The initial draft guideline is reviewed, evaluated, and revised by the committee resulting in draft two of the guideline. Additionally, the Michigan Academy of Family Physicians participates in guideline development at the onset of the process and throughout the guideline development procedure. The MQIC guideline feedback form and draft two of the guideline are distributed to the medical directors, as well as the MQIC measurement and implementation group members, for review and comments. Feedback from members is collected by the MQIC project leader and prepared for review by the medical directors' committee at their next scheduled meeting. The review, evaluation, and revision process with several iterations of the guideline may be repeated over several meetings before consensus is reached on a final draft guideline.

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

Not applicable

## **COST ANALYSIS**

A formal cost analysis was not performed and published cost analyses were not reviewed.

## **METHOD OF GUIDELINE VALIDATION**

External Peer Review  
Internal Peer Review

## **DESCRIPTION OF METHOD OF GUIDELINE VALIDATION**

When consensus is reached on the final draft guideline, the medical directors approve the guideline for external distribution to practitioners with review and comments requested via the Michigan Quality Improvement Consortium (MQIC) health plans (project leader distributes final draft to medical directors' committee, measurement and implementation groups to solicit feedback).

The MQIC project leader also forwards the approved guideline draft to appropriate state medical specialty societies for their input. After all feedback is received from external reviews, it is presented for discussion at the next scheduled committee meeting. Based on feedback, subsequent guideline review, evaluation, and revision may be required prior to final guideline approval.

The MQIC Medical Directors approved this guideline in June 2008.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

The level of evidence grades (A-D) are provided for the most significant recommendations and are defined at the end of the "Major Recommendations" field.

#### **Children 2 Years or Older with a Body Mass Index (BMI) $\geq$ 85<sup>th</sup> Percentile**

##### **Identify Presence of Weight Related Risk Factors and Complications**

*Reinforce Prevention Recommendations* (See also the National Guideline Clearinghouse [NGC] summary of the Michigan Quality Improvement Consortium [MQIC] guideline [Prevention and Identification of Childhood Overweight](#))

History and Physical Exam [**D**]:

- Family history, evaluate general co-morbidities including but not limited to cardiovascular disease and diabetes
- History of medication use including nutritional supplements
- Symptoms of gallbladder disease, Type 2 diabetes, obstructive sleep disorders, hypothyroidism
- Presence of acanthosis nigricans
- Weight-related orthopedic problems
- Pulse and blood pressure, using appropriate technique and cuff size for age
- Be alert to secondary causes of obesity. If aberrant findings are noted (short stature, hypotonia, hirsutism, etc.) then consider genetic and other endogenous causes of obesity.
- Patient or parental concern about weight
- Testing: Annual lipid profile and fasting glucose

##### *Frequency*

Each periodic health exam, more frequently as case requires.

#### **Children 2 Years or Older with a BMI $\geq$ 85<sup>th</sup> – 94<sup>th</sup> Percentile (Overweight) without Risk Factors or Complications**

##### **Lifestyle Intervention to Reach Weight Maintenance**

*Consider All of the Above, Plus*

Intervention to promote weight management/treatment **[D]**:

- Reinforce lifestyle intervention and behavior modification. Focus is appropriate weight maintenance.
- Family must be involved; small gradual changes are recommended towards the stated goal.
- Monitor for increasing BMI percentile
- Monitor for the development of risk factors or complications

*Frequency*

Consider management of childhood obesity as a medium- to long-term intervention.

**Children 2 Years or Older with a BMI  $\geq$  85<sup>th</sup> – 94<sup>th</sup> Percentile with Risk Factors or Complications**

**Lifestyle Intervention with Treatment of Risk Factors and Complications as Needed**

*All of the Above, Plus*

- Primary goal of childhood weight interventions is regulation of body weight and fat with adequate nutrition for growth and development
- Treat risk factors and complications as needed
- Substantial slowing of weight gain may be achieved by relatively small but consistent changes in energy (200 to 500 kcal/day) intake, expenditure or both. If weight loss is desired, an appropriate starting goal is about 1 lb of weight loss per month.
- Consider referral to multidisciplinary pediatric obesity treatment center, pediatric endocrinologist or registered dietitian

*Frequency*

Consider management of childhood obesity as a medium- to long-term intervention.

**Children 2 Years or Older with a BMI  $\geq$  95<sup>th</sup> Percentile (Obese), with or without Risk Factors or Complications**

**Weight Loss with Concomitant Treatment of Risk Factors and Complications as Needed**

*All of the Above Plus*

- Long-term goal should be a body mass index below 85<sup>th</sup> percentile for age and sex
- Consider aggressive approach to weight loss and treatment for patients after conservative approaches have failed
- Consider aspartate transaminase (AST), alanine transaminase (ALT), blood urea nitrogen (BUN), and creatinine

### *Frequency*

Consider management of childhood obesity as a medium- to long-term intervention.

### **Definitions:**

### **Levels of Evidence for the Most Significant Recommendation**

- A. Randomized controlled trials
- B. Controlled trials, no randomization
- C. Observational studies
- D. Opinion of expert panel

### **CLINICAL ALGORITHM(S)**

None provided

## **EVIDENCE SUPPORTING THE RECOMMENDATIONS**

### **TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS**

The type of evidence is provided for the most significant recommendations (see "Major Recommendations" field).

This guideline is based on several sources, including the American Medical Association 2007 Expert Committee Recommendations on the Treatment of Pediatric Obesity ([www.ama-assn.org](http://www.ama-assn.org)).

## **BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS**

### **POTENTIAL BENEFITS**

Through a collaborative approach to developing and implementing common clinical practice guidelines and performance measures for specific treatment interventions for childhood overweight and obesity, Michigan health plans will achieve consistent delivery of evidence-based services and better health outcomes. This approach also will augment the practice environment for physicians by reducing the administrative burdens imposed by compliance with diverse health plan guidelines and associated requirements.

### **POTENTIAL HARMS**

Not stated

## **QUALIFYING STATEMENTS**

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This guideline lists core management steps. Individual patient considerations and advances in medical science may supersede or modify these recommendations.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

Approved Michigan Quality Improvement Consortium (MQIC) guidelines are disseminated through email, U.S. mail, and websites.

The MQIC project leader prepares approved guidelines for distribution. Portable Document Format (PDF) versions of the guidelines are used for distribution.

The MQIC project leader distributes approved guidelines to MQIC membership via email.

The MQIC project leader submits request to website vendor to post approved guidelines to MQIC website ([www.mqic.org](http://www.mqic.org)).

The MQIC project leader completes a statewide mailing of the comprehensive set of approved guidelines and educational tools annually. The guidelines and tools are distributed in February of each year to physicians in the following medical specialties:

- Family Practice
- General Practice
- Internal Medicine
- Other Specialists for which the guideline is applicable (e.g., endocrinologists, allergists, pediatricians, cardiologists)

The statewide mailing list is derived from the Blue Cross Blue Shield of Michigan (BCBSM) provider database. Approximately 95% of the state's M.D.'s and 96% of the state's D.O.'s are included in the database.

The MQIC project leader submits request to the National Guideline Clearinghouse (NGC) to post approved guidelines to NGC website ([www.guideline.gov](http://www.guideline.gov)).

### IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED



Getting Better  
Living with Illness  
Staying Healthy

## **IOM DOMAIN**

Effectiveness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

Michigan Quality Improvement Consortium. Treatment of childhood overweight and obesity. Southfield (MI): Michigan Quality Improvement Consortium; 2008 Jun. 1 p.

### **ADAPTATION**

This guideline is based on several sources, including the American Medical Association 2007 Expert Committee Recommendations on the Treatment of Pediatric Obesity ([www.ama-assn.org](http://www.ama-assn.org)).

### **DATE RELEASED**

2006 Nov (revised 2008 Jun)

### **GUIDELINE DEVELOPER(S)**

Michigan Quality Improvement Consortium - Professional Association

### **SOURCE(S) OF FUNDING**

Michigan Quality Improvement Consortium

### **GUIDELINE COMMITTEE**

Michigan Quality Improvement Consortium Medical Director's Committee

### **COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

Physician representatives from participating Michigan Quality Improvement Consortium health plans, Michigan State Medical Society, Michigan Osteopathic Association, Michigan Association of Health Plans, Michigan Department of Community Health and Michigan Peer Review Organization

### **FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

Standard disclosure is requested from all individuals participating in the Michigan Quality Improvement Consortium (MQIC) guideline development process,

including those parties who are solicited for guideline feedback (e.g., health plans, medical specialty societies). Additionally, members of the MQIC Medical Directors' Committee are asked to disclose all commercial relationships.

## **GUIDELINE STATUS**

This is the current release of the guideline.

This guideline updates a previous version: Michigan Quality Improvement Consortium. Treatment of childhood overweight. Southfield (MI): Michigan Quality Improvement Consortium; 2006 Nov. 1 p.

## **GUIDELINE AVAILABILITY**

Electronic copies: Available in Portable Document Format (PDF) from the [Michigan Quality Improvement Consortium Web site](#).

## **AVAILABILITY OF COMPANION DOCUMENTS**

The following is available:

- Communication guidelines to promote health behavior change. Electronic copies: Available in Portable Document Format (PDF) from the [Michigan Quality Improvement Consortium Web site](#).

## **PATIENT RESOURCES**

None available

## **NGC STATUS**

This NGC summary was completed by ECRI Institute on July 13, 2007. The information was verified by the guideline developer on July 16, 2007. This NGC summary was updated by ECRI Institute on December 15, 2008. The updated information was verified by the guideline developer on December 17, 2008.

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